

ABSTRACT

An optical assembly which allows for passive alignment of the various elements is described. A substrate with a cut out portion and an upper surface is utilized as a mount for an optical array and an imaging assembly. The optical array, which preferably includes a plurality of optical fibers is positioned on V-grooves located on the upper surface. The imaging assembly, which preferably includes a plurality of lenses, such as GRIN lenses, is lowered at least partially into the cut-out portion. The optical fibers are optically coupled with said lenses. A waveguide, having a plurality of waveguide cores within a cladding, may further be optically coupled with the lenses, or alternatively, directly to the optical fibers. An integrated optic chip may also be affixed to the substrate or mounted on the substrate.